[0116] The value of an azimuthal angle $\epsilon$ of the above-defined type can be specified e.g. through a biometric inclination angle $\beta$ (**311**) defined between a first articular bone **303** of the writing hand index finger **302** and a second articular bone **304** of the writing hand index finger **302**, and additionally characterized by the spatial orientation of the axis of rotation (not shown) of the proximal interphalangeal joint **308** of the index finger **312** of the writing hand **302** of the user during writing.

[0117] The axis of rotation of the proximal interphalangeal joint of the index finger is given through the biomechanics of the writing hand, and its orientation relative to the X axis (not shown) is a typical parameter by means of which the individual handwriting can be characterized.

[0118] The biometric inclination angle $\beta$ (**311**) can be set, for example by the user, e.g. in default settings of the signal-processing software of the electronic pen **300**.

[0119] For the sake of completeness, it should be mentioned that the features, definitions and/or magnitudes which are exemplarily described in the figures can be combined in accordance with the present invention.

[0120] Followed by 3 sheets with 3 figures. The reference numerals identify the following components:

[0121] **100** electronic pen

[0122] **101** first coordinate axis, e.g. X axis

[0123] **102** second coordinate axis, e.g. Y axis

[0124] **103** third coordinate axis, e.g. Z axis

[0125] **104** elevation angle or inclination angle $\gamma$ of the longitudinal axis of the electronic pen with respect to the writing substrate

[0126] **105** azimuthal angle $\epsilon$

[0127] **106** projection of the longitudinal axis **107** of the electronic pen **100** onto the writing substrate **108** or line of intersection along which a plane, defined by the longitudinal axis **107** of the pen and a writing substrate perpendicular, intersects the writing substrate plane.

[0128] **107** longitudinal axis of the electronic pen

[0129] **108** writing substrate/writing substrate plane

[0130] **109** writing rod tip

[0131] **110** character written with the electronic pen

[0132] **111** coordinate system X, Y, Z, reference coordinate system

[0133] **200** electronic pen

[0134] **201** first coordinate axis, e.g. X axis

[0135] **202** second coordinate axis, e.g. Y axis

[0136] **203** azimuthal angle $\epsilon$

[0137] **204** longitudinal axis of the electronic pen

[0138] **205** writing substrate/writing substrate plane

[0139] **206** second character axis or minor axis

[0140] **207** coordinate system X, Y, Z, reference coordinate system

[0141] **208** direction angle $\eta$ of a preferential direction of writing

[0142] **209** first character axis or major axis

[0143] **300** electronic pen

[0144] **301** longitudinal axis of the electronic pen

[0145] **302** writing hand of a user of an electronic pen **300**

[0146] **303** first articular bone of the index finger of the writing hand

[0147] **304** second articular bone of the index finger of the writing hand

[0148] **305** third articular bone of the index finger of the writing hand

[0149] **306** fourth articular bone of the index finger of the writing hand

[0150] **307** first joint (metacarpophalangeal joint) of the index finger of the writing hand

[0151] **308** second joint (proximal interphalangeal joint) of the index finger of the writing hand

[0152] **309** third joint (distal interphalangeal joint) of the index finger of the writing hand

[0153] **310** writing rod tip

[0154] **311** biometric inclination angle $\beta$

[0155] **312** index finger of the writing hand of a user

[0156] **313** thumb of the writing hand of a user

**1**. A method of recognizing and evaluating pen positions of an electronic pen (**100**, **200**, **300**) with inertial measurement sensors during writing on a two-dimensional writing substrate (**108**, **205**), the method comprising

initially specifying a writing coordinate system with two axes X, Y (**101**, **102**, **201**, **202**), which are orthogonal to each other on the writing substrate (**108**, **205**) and an axis Z (**103**) perpendicular to the two-dimensional writing substrate (**108**, **205**), the X axis (**101**, **201**) defining a predominant writing direction, and writing substrate coordinates x, y being defined with respect to said writing coordinate system,

compensating an undesirable drift in a pen position signal of the electronic pen to be output, the compensating comprising:

executing in parallel a coordinate transformation of the azimuthal angle $\epsilon$ (**105**, **203**) and of the inclination angle $\gamma$ (**104**) of the electronic pen (**100**, **200**, **300**) into writing substrate coordinates x, y for the values of the azimuthal angle $\epsilon$ (**105**, **203**) and of the inclination angle $\gamma$ (**104**) determined from the inertial measurement sensors as well as for a plurality of additional predeterminable values of the azimuthal angle $\epsilon$ (**105**, **203**) and the inclination angle $\gamma$ (**104**), the coordinate transformation comprising

determining the optimum linear combination of the values of the azimuthal angle $\epsilon$ (**105**, **203**) and of the inclination angle $\gamma$ (**104**) at which a minimum deviation of an ascertained acceleration of the electronic pen in the Z direction from a predetermined, expected acceleration in the Z direction is accomplished, and

selecting the determined values of the azimuthal angle $\epsilon$ (**105**, **203**) and of the inclination angle $\gamma$ (**104**), which result in a minimum deviation of an ascertained acceleration of the electronic pen in the Z direction from a predetermined, expected acceleration in the Z direction, for correcting a pen position signal to be output.

**2**. The method according to claim **1**, wherein the azimuthal angle $\epsilon$ (**105**, **203**) is defined as the angle between the X axis of the coordinate system (**111**, **207**) to be specified and the line of intersection (**106**) along which a plane, defined by the longitudinal axis of the pen and a writing substrate perpendicular, intersects the writing substrate plane.

**3**. The method according to claim **1**, wherein a value of $+30°\pm10°$ is specified as an initial value of the azimuthal angle $\epsilon$ (**105**, **203**).

**4**. The method according to claim **1**, wherein values of the azimuthal angles $\epsilon$ (**105**, **203**) and/or of the inclination angles $\gamma$ (**104**) are varied in step widths of $\leq 1°$ or $\leq 0.1°$ for